



EPA Region 7 TMDL Review

TMDL ID	11	Water Body ID	LP2-L0160
Water Body Name	Pawnee Reservoir		
Pollutant	Sediment		
Tributary	Middle Creek (North Branch)		
State	NE	HUC	10200203
Basin	Missouri		
Submittal Date	01/19/2001		
Approved	Yes		

Submittal Letter

State submittal letter indicates final TMDL(s) for specific pollutant(s)/ water(s) were adopted by the state, and submitted to EPA for approval under section 303(d) of the Clean Water Act.

EPA received Nebraska's formal submission of this TMDL on January 19, 2001 with a cover letter dated January 18, 2001. A revised TMDL was received February 28, 2001 via e-mail.

Water Quality Standards Attainment

The water body's loading capacity for the applicable pollutant is identified and the rationale for the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources is described. TMDL and associated allocations are set at levels adequate to result in attainment of applicable water quality standards.

Nebraska's WQS for sediment is narrative. The narrative standards protects the aquatic life use of the water body.

The standard will be met by reducing the amount of sediment delivered to the reservoir each year. This will improve the aesthetic appeal of the reservoir.

Numeric Target(s)

Submittal describes applicable water quality standards, including beneficial uses, applicable numeric and/or narrative criteria. If the TMDL is based on a target other than a numeric water quality criterion, then a numeric expression, site specific if possible, was developed from a narrative criterion and a description of the process used to derive the target is included in the submittal.

The Numeric Target is based on a methodology originally developed by the State of Illinois. The methodology identifies greater than or equal to 0.75 percent volume loss is considered substantial. Those water bodies that fall into this "substantial" category are considered impaired. The target is to meet 0.749 percent volume loss.

Link Between Numeric Target(s) and Pollutant(s) of concern

An explanation and analytical basis for expressing the TMDL through surrogate measures (e.g., parameters such as percent fines and turbidity for sediment impairments, or chlorophyll-a and phosphorus loadings for excess algae) is provided, if applicable. For each identified pollutant, the submittal describes analytical basis for conclusions, allocations and margin of safety that do not exceed the load capacity.

The target is an average annual volume loss; the volume loss equals volume of sediment deposited, which links the target with the pollutant.

Source Analysis

Important assumptions made in developing the TMDL, such as assumed distribution of land use in the watershed, population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources, are described. Point, non point and background sources of pollutants of concern are described, including magnitude and location of the sources. Submittal demonstrates all significant sources have been considered.

Sediment delivery to the reservoir is entirely from nonpoint sources. The primary source is from overland sheet and rill erosion. About 12% of the watershed is identified as having gross erosion rates of more than 5 tons/acre/year. Gully erosion, stream bank erosion and shoreline erosion are considered source.

Allocation

Submittal identifies appropriate wasteload allocations for point, and load allocations for nonpoint sources. If no point sources are present the wasteload allocation is zero. If no nonpoint sources are present, the load allocation is zero.

The load capacity of sediment that will meet the 0.75% volume loss target is 90,224 tons per year.

WLA Comment

The WLA is zero.

LA Comment

The load allocation is 81,202 ton per year of sediment.

Margin of Safety

Submittal describes explicit and/or implicit margin of safety for each pollutant. If the MOS is implicit, the conservative assumptions in the analysis for the MOS are described. If the MOS is explicit, the loadings set aside for the MOS are identified and a rationale for selecting the value for the MOS is provided.

The MOS is 10% of the load capacity. This is 9,022 tons/year.

Seasonal Variation and Critical Conditions

Submittal describes the method for accounting for seasonal variation and critical conditions in the TMDL(s).

Seasonal and annual variations are not a factor in this TMDL

Public Participation

Submittal describes public notice and public comment opportunity, and explains how the public comments were considered in the final TMDL(s).

This TMDL was made available to the public on the Department's Internet site and the availability of the draft TMDL was announced through three newspapers; namely Lincoln Journal Star, York News-Times and the Hastings Tribune. The public notice/comment period was from June 17 through October 17, 2000. Additionally a copy of the draft TMDL were mailed to potential stakeholders. The Department also attended and made presentations at a combined Lancaster County, Seward County and Saline County Farm Bureaus meeting.

Monitoring Plan for TMDL(s) Under Phased Approach

The TMDL identifies the monitoring plan that describes the additional data to be collected to determine if the load reductions required by the TMDL lead to attainment of WQS, and a schedule for considering revisions to the TMDL(s) (where phased approach is used).

The USACE plans to continue their sediment surveys of Pawnee Reservoir about every five years.

Reasonable assurance

Reasonable assurance only applies when reduction in nonpoint source loading is required to meet the prescribed waste load allocations.